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# Poverty and Regional Inequality in Ghana: A Review.

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November 2013

Online at <https://mpra.ub.uni-muenchen.de/69289/>

MPRA Paper No. 69289, posted 7 February 2016 14:45 UTC

# POVERTY AND REGIONAL INEQUALITY IN GHANA; A REVIEW

## Abstract

Poverty is one of the most familiar and enduring conditions known to humanity. Some researchers view it as a reaction to the stress of being poor, whereas others perceive it as a process of adapting to the condition of poverty. In this paper, we review the regional Poverty and Inequality disparities in Ghana. We concluded that, the annual cash income concept is a poor indicator of the lifetime resources and hence, consumption may not fully reflect a family's true well-being.

**Keywords:** Poverty Inequality, Gini coefficient, Generalized Entropy

## 1. INTRODUCTION

Historical definitions of poverty are numerous, but can be classified as relating to either lack of financial income or lower social status. Different factors contribute to the concept of poverty, including political, economic, social, and cultural forces. The United Nations Development Programme reports on the flood of development rhetoric on poverty. The primacy accorded by lenders and donors to the Millennium Development Goals, of which the reduction of extreme poverty is the first and usually considered the most important. The frequency with which reducing, alleviating or eliminating poverty is seen as a prime goal and measure of development, to make it more relevant to know what poverty is. From this perspective, it has at least five clusters of meanings.

Poverty measurement and comparisons has provided endless scope for debate. The first is income-poverty or its common proxy (because less unreliable to measure) consumption-poverty. When many, especially economists, use the word poverty they are referring to these measure. The second cluster of meanings is material lack or want besides income; this includes lack of or little wealth and lack or low quality of other assets such as shelter, clothing, furniture, personal means of transport, radios or television, and so on. This also tends to include no or poor access to services. A third cluster of meanings is expressed as capability deprivation, referring to what we can or cannot do, can or cannot be (Sen, 1992). This goes beyond material lack or want to include human capabilities; that is, skills, physical abilities, and self-respect in society. A fourth cluster takes a yet more broadly multi-dimensional view of deprivation, with material lack or want as only one of several mutually reinforcing dimensions (UNDP 2006).

Spatial or regional inequalities refer to the uneven distribution of income and other socioeconomic variables across different locations or regions. There is a growing sense across much of the developing world and other transitional economies that spatial and regional inequality of income, economic activities and other social indicators is on the increase (World Bank 2009). According to Kanbur and Venables (2003), spatial inequality matters for a number of reasons. They explained that, it reflects market failures. In addition, the positive and negative externalities associated with clustering and congestion means that development outcomes are likely to be inefficient.

Nationally, spatial inequalities raise policy issues regarding how to manage the disparities in resources and living standards within and across various localities of a country. More importantly, when regional inequality coincides with divisions between socio-economic groups such as migrants and natives, different ethnicities, different religions, it is not the numerical value but its mere existence that is important. Such spatial inequality can produce severe consequences such as discontent, conflict and even war (Kanbur, Venables & Wan, 2006). In this work, we review the regional Poverty and Inequality disparities in Ghana focusing on papers presented by Aryeetey, Owusu & Mensah, (2009) and Annim Mariwah & Sebu, (2012). Several literatures have so far focused on poverty and inequalities but few of them relating to the Ghanaian context will be dealt with.

According to Bhasin and Annim (2005), Poverty in Ghana has many different dimensions. Poor communities are characterized by low income, malnutrition, ill health, illiteracy and insecurity. There is also a sense of powerless and isolation. These different aspects interact and keep households and communities in persistent poverty. In Ghana, disparities in social and economic well-being are evident between various spatial units across the country, particularly southern Ghana and northern Ghana. Such regional or spatial disparities can also be viewed in terms of urban and rural differentials. The spatial disparities prevail despite sustained economic growth and poverty reduction efforts over the last decade. More importantly, the trend towards increased regional inequalities comes within the context of positive economic growth in several parts of the developing world in recent times, especially in previously poor performing regions, such as sub-Saharan Africa (Aryeetey et al., 2009). Ghana's economy has been noted to be growing at an impressive rate, albeit with increasing consumption inequality at the national level. Thus, although some analysts and economists have conferred a middle-income status on the country, the question remains as to whether the increasing inequality makes the growth volatile or otherwise. This pattern of wellbeing underscores the relevance of some recent studies that have explored the patterns, trends and relationships between economic growth, poverty and inequality in Ghana (Coulombe and Wodon, 2007; Aryeetey et al., 2009).

## **2. ANALYSIS AND DISCUSSIONS**

We first outline the method used by Aryeetey et al., (2009) and Annim et al., (2012) in their study of poverty inequality in Ghana. In both referred papers, they use almost the same data and methodological approach in analyzing poverty and regional inequality. Annim et al., (2012) obtained their data from the Ghana Living Standard Survey (GLSS), which is a nationwide survey carried out by the Ghana Statistical Service (GSS); Aryeetey et al., (2009) also adopted the same source of data. The GLSS provides a panel dataset for analyzing the patterns and trends on income inequalities and by extension other socio-economic disparities at the regional administrative level. The first round of the GLSS was conducted in 1987-88 and as at 2006, five rounds have been conducted, with the second, third, fourth and fifth rounds conducted in 1988-99, 1991-92, 1998-99 and 2005-06, respectively. The two overarching goals of the GLSS survey are to track the

wellbeing of Ghanaians and to serve as a source of information for Ghana's national accounts. In so doing, it focuses on the household as the socio-economic unit, but collects information on individuals within the household and on the communities in which the households are identified. Among the thematic issues on which the GLSS captures information are demographic characteristics, education, health, economic activity, migration and tourism.

In Ghana, though non-income indicators such as access to health, education, housing, security and the level of employment have been increasingly considered in the measurement of poverty, the use of poverty line is still widely used. The poverty line is constructed from the Ghana Statistical Service's (GSS) food consumption poverty measurement which is obtained from the GLSS. It is from this measurement that a poverty line is set that indicates the level of standard of living measure at which minimum consumption (or nutritional requirements) must be met (GSS 2000, 2007).

The GLSS uses the Foster, Greer and Thorbecke (FGT) class of poverty measures. This approach facilitates the measurement of poverty from three perspectives: incidence (headcount); depth (poverty gap); and severity (square of poverty gap). The poverty line derived from the GLSS attempts to capture the level and incidence of poverty based on household income. Indeed, household income is regarded here as a critical determining factor of household wellbeing as it significantly determines the economic well-being of individuals and households in an economic system.

Measurement of inequality has also evolved to include approaches such as decile dispersion ratio, Gini coefficient (Lorenz curve) of inequality, generalized entropy (GE) measure, standard deviation, variance and Atkinson's inequality measures. Among these measures are the Gini coefficient and Generalized Entropy (GE) class of inequality measures, which these papers adopt in the analysis of regional inequality in Ghana. As most widely reported in empirical studies, the Gini coefficient is applied to provide an outline of the changes in income inequality over the period of the study. The GE measure of inequality (Theil index) was also used because of its advantage of decomposing inequality into subgroups of the population, such as regions and districts in a country.

The Gini coefficient measure of inequality is derived from the Lorenz curve framework of assessing income inequality. This framework is based on a graphical representation of the distribution of total income among cumulative proportion of a population (De Maio 2007). In this sense, an equal distribution of total income presents equal fraction of total income (say, 30 percent) to the same cumulative proportion of the population (that is, 30 percent). The more unequal the distribution, the less the fraction of total income held by this cumulative percentage of the population. Thus, for a population of size  $N$ , individual income levels of  $y$  and mean income of  $\bar{y}$ , Pyatt (1980) formulate this argument to yield a single index of inequality, the Gini coefficient ( $G$ ), given as:

$$Gini = \frac{2Cor(y, r_y)}{N \bar{y}}$$

where  $2Cor(y, r_y)$  is the covariance between individual income ( $y$ ) and the ascending rank of the individuals in the population according to the level of their incomes ( $y, r_y$ ). In this sense, the poorest individual in the population attains a rank of 1 whereas the richest is ranked  $N$ . The value of the Gini ranges between 0 and 1, with 0 representing a perfectly equal distribution of income in the population. Increasing values of Gini within the range represent increasing levels of inequality in the distribution of income. A value of 1 (or 100%) in this instance then imply a perfectly unequal distribution of income, with the total income held by the  $N^{th}$  individual (Aryeetey et al., 2009).

The GE index also allows for the account of different levels of sensitivities to inequality at different segments of the income distribution, the Gini coefficient is noted to be most sensitive to income inequalities at the middle segment of the income distribution. This particular property of the GE allows the formulation of the index to account for different numerical values of the sensitivity parameter. The GE has the general formula as:

$$GE(\alpha) = \frac{1}{\alpha^2 - \alpha} \left[ \frac{1}{n} \sum_{i=1}^n \left( \frac{y_i}{\bar{y}} \right)^\alpha - 1 \right]$$

with  $n$  being the sample size,  $y_i$  captures the individual  $i$ 's income, where  $i \in (1, 2, \dots, n)$  and

$\bar{y} = \left( \frac{1}{n} \right) \sum y_i$  represents the arithmetic mean of income. The value of the GE ranges from 0

(showing an equal distribution of income) to  $\infty$  (showing increasing levels of income inequality).

GE class measures are sensitive to changing values of  $\alpha$  which captures the differences of income at various parts of the income distribution. The values mainly used for  $\alpha$  are 0, 1 and 2, though they take on other real values. A lower value of 0 makes GE highly sensitive to changes in the lower tail of the income distribution, while a higher value like 2 makes GE sensitive at the upper tail of the income distribution. But  $\alpha$  value of 1, also known as the Theil index, implies equal weight over the income distribution (Annim et al., 2012).

Aryeetey et al., (2009), used total earnings of members of households as the primary variable for their study. These earnings are aggregated and expressed in Accra, January 1999 constant prices (GSS 2000). In the same vain, the 1998/99 national higher poverty line of ¢900,000 (or present-day GH¢ 90) per adult equivalent per year is used in the analysis.

Aryeetey et al., (2009), indicated that poverty in Ghana has generally declined since 1991. Estimates from the GLSS dataset suggest that income poverty in Ghana has falling from 51.7 percent in 1991 (GLSS 3) to 28.5 percent in 2006 (GLSS 5). As noted in Table 1, this represents a decline of 23.2 percentage points, further from the 12.3 percentage points decline recorded from the GLSS 4 (1998). In their computations, they noted a difference in the changes in headcount poverty rate particularly between 1991 and 2006 in the Eastern and the Western regions (a decline

of 42 and 41 percent respectively). They also observe a considerable decline in the other regions except the three Northern regions which reported an overall increase in the poverty rate. They also applied the Lorenz curve to assess changes in income inequality between the three survey years of the data used and noted again that while increase in inequality between the survey years were not spectacular, and therefore do not appear to reflect strongly in the Lorenz curve for 1991 and 2006. The income distribution for GLSS 3 displays an obvious second order stochastic dominance over the distribution noted for GLSS 5. This implies a deterioration of the overall welfare of the population in GLSS 5, as against GLSS 3, which is particularly reinforced by the observed distribution of total income in GLSS 4. This computation was consistent with the result from the generalized Lorenz Curves reported above; all three measures indicate increasing levels of overall income inequality in Ghana. The trend observed for both GE indices reveal the steady deterioration in income inequality for all the three data points (years) but especially between GLSS 4 and 5.

Annim et al., (2012) objective was to examine the trend of within inequality (component of disparities that can be associated with differences within areas) and between inequality (part of differences attributable to between areas) for different geographical classifications. Their study decomposes the GE index of inequality for four spatial zones – the rural/urban, the ecological, the regions, and the districts in Ghana.

### **3. CONCLUSION**

These papers discussed show that inequalities exist between regions, but are even wider within regions. Annim et al., (2012) found that within-district inequality contributed relatively more to the increasing trend of national inequality between 1998 and 2006. Also, analysis of regional and district-level inequalities indicates that although overall inequality has been on the ascendancy, some regions and districts recorded very significant reductions over the period 1991 to 2006. Therefore policy intervention directed towards reducing inequality in Ghana should therefore take into consideration variations in patterns and trends of the different components of national inequality (between and within analysis) and also should explore individual district inequality.

A primary criticism of income poverty measures is that, the annual cash income concept on which they rest is a poor indicator of the permanent income (or lifetime resources) of the family unit. Using such a measure, a wealthy family with a well-educated head and substantial assets, but a year of low income, would be classified as “poor.” The reason being that consumption may not fully reflect a family’s true well-being; it is possible that simple frugality may be mistaken for poverty. Moreover income or consumption poverty indicators we have discussed reflect a particular social objective—that all households should have sufficient income (or consumption) from either public support or their own efforts to enable them to attain a minimally acceptable level of living. From a quite different social objective, one could argue that those people in society who are truly poor—who have the lowest economic position or well-being—are those who do not have the capability to make it “on their own,” to be self-reliant. Sen (1992) has argued that “the

basic failure that poverty implies is one of having minimally adequate capabilities” and, hence, that “poverty is better seen in terms of capability failure than in terms of the failure to meet the ‘basic needs’ of specified commodities”. He calls for “reorienting poverty analysis from low incomes to insufficient basic capabilities,” arguing that “the reorientation from an income centered to a capability-centered view gives us a better understanding of what is involved in the challenge of poverty”.

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